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## CONTENTS.

### CLINICS.

### CLINICAL LECTURE.

Lecture on Hip Disease . . . . . 113

### MEDICAL NEWS.

*Domestic Intelligence.*—Uses of Carbolic Acid 118  
Deaths from Chloroform . . . . . 118  
Medical Graduates in 1869 . . . . . 118  
Prize of the French Academy of Sciences . . . . . 119  
In Memoriam . . . . . 119

*Foreign Intelligence.*—Sulphate of Quinia  
in Tropical Diarrhoea . . . . . 119  
Iodide of Ammonium in Diseases of the  
Glandular System . . . . . 119

Local Treatment of Croup . . . . .	121
Iron Sugar . . . . .	121
Apomorphia . . . . .	121
On the Injection of Ammonia into the Circu- lation . . . . .	122
Otitis of the Middle Ear in New-born Infants . . . . .	122
Suture of a Tendon . . . . .	123
Test for Hydrocyanic Acid . . . . .	123
New Hospital for Sick Children . . . . .	123
Biostatic Immunities of the Jewish Race in Europe . . . . .	124
International Medical Congress . . . . .	125
Relief of the Sick and Wounded in Time of Maritime War . . . . .	125
Mortality in Hungary . . . . .	126
The Moners . . . . .	127

SMITH ON WASTING DISEASES OF CHILDREN.

16 PAGES

### CLINICS.

### CLINICAL LECTURE.

*Lecture on Hip Disease.* By THOMAS BAYANT, Assistant-Surgeon to Guy's Hospital.—That disease of the hip joint differs in no single pathological point from disease of any other articulation is the most important point a surgeon can have before him when commencing its consideration, for authors upon this subject have hitherto been too much disposed to lead their readers to look upon it as a special or peculiar affection, and to believe that it is both pathologically and clinically distinct from the diseases of other joints.

It has also with too much confidence been described as a "strumous disease," as if all diseases of the hip-joint or of any joint are generally of this nature, or are found only in subjects of a strumous diathesis, and have a constitutional and not a local origin.

To look upon hip-joint disease as a strumous affection is unquestionably wrong, pathologically as well as clinically. It is found in the so-called strumous subjects as frequently as, but not more frequently than, any other affection. It is always a local disease, and is too frequently set up by local causes. Moreover, it is as amenable to local treatment as any other local affection.

It is not, in the true sense of the word, a constitutional disease, and the sooner that idea is got rid of the better it will be for the profession as well as for our patients. "The affection occurs very frequently in strumous children," says a recent able author (Mr. Holmes), "a circumstance which has led to its being denominated 'strumous,' but it seems to have no necessary connection with struma, unless so wide a signification be assigned to that somewhat vague term as would render the designation itself unmeaning. If by struma be meant a state

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VOL. XXVII.—8

of the system which renders the subject of it prone to the deposit of tubercle in the viscera, I think that there is good reason for asserting that *morbus coxarius* often attacks children who are not strumous—i. e., who display no such tendency to the deposit of tubercle—and therefore that no decisive proof of any strumous tendency is afforded by the presence of the affection. If on the contrary, struma be defined as that condition of the system which disposes its subjects to the development of low inflammations of various kinds, then it is difficult to see what is the significance of the designation." In these remarks I cordially agree. It would, therefore, be well to get rid of the erroneous notion that hip disease, or any other joint disease, has its origin in a constitutional cause, for till that is effected the local treatment is likely to be disregarded, or only regarded as being of secondary importance, when all who have much experience in the treatment of these cases will admit that local treatment cannot be made of too prominent importance.

Hip disease should therefore clinically be looked upon as a local affection, and be treated principally by local means; such constitutional treatment being employed as the general condition of the patient may appear to warrant, the same principles of practice being in these cases applicable as are found of value in the treatment of any other joint affection.

Hip disease is unfortunately a very common affection. My own statistics of joint cases tell me that it forms about 30 per cent. of the joint cases admitted into a metropolitan hospital.

It is also an affection of child life, for out of 360 cases, of which I have notes, 62 per cent., or nearly two-thirds, occurred in children under 10 years of age, and four-fifths in patients under 20—that is, it occurred during the growth and development of the bone, and not during the period of its full maturity. This point will be seen on reference to the following table:—

Table showing the Ages at which Hip Disease commenced.

Four years and under	126 cases	223 cases, or
Between 6 and 10 years	97	61.9 pr. ct.
" 11 " 20 "	86	or 23.8 "
" 21 " 30 "	27	or 7.5 "
" 31 " 40 "	13	or 3.6 "
Above 40 years of age	11	or 3 "

230 of these cases were collected by me when acting as Registrar to Guy's from

1853 to 1861; 130 are from the notes of cases which have been under my own care.

Hip disease is found in equal proportion in the male and the female subject. But it seems to attack the left limb more frequently than the right, 60 per cent. of my cases having occurred in the left side, and 40 in the right; this proportion being very similar to that published by Mr. Lonedale in the *Lancet* for September 8, 1855, where, out of 112 cases of deformity of the hip, 65 were of the left side and 47 of the right.

With these preliminary remarks we will now proceed to consider briefly the pathology of the disease.

*Pathology of hip disease.*—It has been already stated that, in a pathological point of view, hip disease differs in no single respect from that of other joints, and that it is not a strumous affection, although it may occur in strumous subjects. It may be said also—as it has been said before—that it is a very rare thing to find strumous or tubercular matter in a diseased joint, and the hip-joint forms no exception to this remark. Disease of the hip-joint means therefore—excluding new growths involving the part—inflammation of the bones or soft parts entering into the articulation.

Few points in the pathology of joints have been more disputed probably than the seat of the disease in hip-joint affection; but, I take it, the difficulty has been entirely raised upon the mistaken notion that it had a special origin, and that the nature of the affection was different from other joint diseases. We have never heard much importance placed upon the point in diseases of the knee, shoulder, or other joints. The question has never been very warmly discussed as to the origin or not of disease of the knee in crucial ligaments, or of the shoulder in the long tendon of the biceps. And yet we find men—good men and true—gravely discussing the question as to the origin of hip disease in the ligamentum teres. My late respected teacher, Mr. Ashton Key, laid great stress upon this point, and believed that it was from that ligament and its attachments that disease of the hip-joint generally proceeded. Pathology has, however, made great advances since those days, and we now know that disease in a joint (hip or other) may have its origin in the bones which form the joint, or in the soft parts or ligaments that hold them to-

gether. Experience has told us that we may have an acute inflammation of the synovial membrane of the hip-joint rapidly going on to complete disorganization of the ligaments, cartilages, and soft parts of the joint, and even causing death of the bones entering into its formation. The inflammation may be so acute as to render it difficult at the post-mortem examination of such a case to read the pathological facts correctly, for when such changes take place as have just been indicated, it is fairly open to the question whether the inflammation originated in the synovial membrane, and from such a centre spread to the bones, cartilages, and ligaments, causing their destruction, or began in an osseous centre and extended to the joint. In some cases the disease may have been so severe as to cause a separation of the pelvic bones into their original segments, or a dislocation of the epiphysis of bone forming the head of the femur from its normal attachment to the neck.

Under all these circumstances, the ligaments and soft parts, with the articular cartilage, will have been completely destroyed, and the exact locality in which the disease originated will be difficult to make out. When we find all the bones of the joint equally involved in such acute disease, it is probable that the disease began in the synovial membrane, and spread to them in the same way as we meet with diseases of bone as a result of acute periostitis. But when we find one bone more diseased than another—*e. g.*, the femur than the acetabulum, or *vice versa*—it is probable that acute inflammation originated in it and spread to the soft parts. These points, indeed, are to be looked upon as only feeble indications upon which an opinion may be formed, and not as definite guides. Nevertheless, they are based on observations of cases. In chronic disease of the hip-joint, however, the question as to the seat of the original disease is not so easily answered, and yet, from what I have observed clinically and pathologically, I do not put the question down as being one which it is impossible to answer. It may be difficult, in some cases it may be impossible; but in the majority, I believe, an opinion can be formed by a careful attention to clinical facts and pathological conditions.

When we find a joint disorganized, with its ligaments and cartilages gone, and ar-

ticular surfaces of the bones exposed, and perhaps diseased, there may be some difficulty in deciding as to the particular tissue in which the inflammation originated; but when a section of the bone is made—the head of a femur, the head of a tibia, or any other bone—and a cavity is found communicating with the joint, a sequestrum of necrosed bone, or a suppurating bone, probabilities certainly point to the bone as being the original seat of the disease.

These cases do occur, and they are not far from common. I have the notes of many such now before me, and the different museums contain more. But it may be said that no one doubts the cause of the joint disease in such instances, and that the pathological conditions found to exist clearly prove it; yet the clinical histories of such cases differ in no single point from the clinical histories of others in which, perhaps, the same very marked evidence of disease is not to be seen—that is, by the pathological examination of the joint from its surface only. Indeed, to examine a pathological specimen of a bone, or of a diseased joint, it is absolutely necessary to make a vertical section through the bone; to look at it from the joint surface is most fallacious, and an opinion formed from the appearance thus acquired is too likely to be wrong.

If we make, therefore, a section of the bone, we shall in a large number of cases of disease of the joint, particularly in the young subject, find hyperaemia of the articular extremity of the bone, condensation from chronic inflammatory action of the bone, if not suppuration or necrosis—in fact, marked evidence of articular osteitis in one of its stages, for this is in my experience the most common form of disease which precedes joint mischief, and from which joint disease proceeds in the great bulk of cases during young life. This opinion is also well supported by the fact that in our museums almost every specimen of chronic joint disease reveals extensive bone mischief—mischief that extends beyond the surface of the bone, and generally involves more or less of the articular end of one or more entering into the formation of the joint. In our own hospital museum this point is very strongly displayed, and on looking over other museums and very extensive notes of joint cases the same truth comes out very clearly.

This pathological observation must be

looked upon as being one of great clinical importance, for if the majority of cases of joint disease are to be attributed to the extension of inflammatory action from the articular extremity of a bone to the other tissues, it becomes a question of immense importance to recognize the disease of the bone in its early stage, and thus, if possible, to prevent its progress to the true joint—that is, to the tissues upon which the integrity of the joint itself depends—and clinically there is good reason to believe that such can frequently be done. In the hip-joint this point may be a difficult one to settle; that is, it is more difficult than it is in disease of other articulations, such as the knee, that are not so well covered in with soft parts. Nevertheless, even in the hip it is to be made out by care and discrimination. And perhaps it may be well to consider here the clinical points upon which our diagnosis is to be determined. They are not numerous.

The first clinical point to which I propose to draw attention has reference to synovitis; for inflammation of this membrane, of whatever kind, always shows itself within a few hours or days of its origin by effusion, and consequently by distension of the articulation. In the knee, ankle, elbow, wrist, shoulder, and other joints, this clinical condition, as a rule, makes itself manifest in a way which cannot be misinterpreted. The synovial sac becomes enlarged and distended by the effusion, so that it bulges between the bones and gives an outline to the joint, which is unlike that furnished by any other condition. In the hip-joint similar changes take place, but they are not quite so palpable; they can be made out by a careful examination, and particularly by a comparison of the affected with the sound side—a point of practice which should never be omitted in the examination of any injured or diseased joint. The soft parts in front of the joint will in synovial mischief be more prominent and full; pain will be produced by gentle pressure made upon the part, particularly behind the great trochanter; a soft swelling will also exhibit in lieu of the natural depression; and to the eye a greater fulness will be visible. Even fluctuation may be detected through the joint on careful palpation. At any rate, to the eye and hand there will be clearly some extra fulness of the soft parts, enough to lead one to suspect the true nature of the

disease. This fulness or swelling is always an early symptom of the disease, for in a clinical point of view synovitis is in its earliest state indicated by enlargement of the affected joint.

In disease of the articular extremities of the bones a different clinical condition will be found to exist. At the commencement of the disease, and sometimes for a lengthened period, which varies in each case, an aching of the part is the only local symptom. This aching may be of greater or less intensity, the pain depending much on the severity of the disease. It is too often looked upon as "growing pains," or as rheumatism. But what I wish now to note is that local pain is the first clinical symptom, and not effusion; there is no enlargement of the affected joint. As the disease progresses, an enlargement may be detected. It may in the hip be made out by manipulation; in the knee or other joints it may be visible to the eye. It will, however, be an enlargement clearly of the bone, a thickening or expansion of the osseous structure, unlike that existing in synovial disease. There will be no fluctuation, no soft yielding of the parts, but clearly an expansion of the osseous structure—an enlargement of the articular extremity of the bone. The soft parts will, as a rule, be quite natural over the enlarged bone. With this aching of the part there will also be increase of heat, this increase of heat being also an early symptom. It will not be constant, although tolerably uniformly so; it will be intermittent, and, as a rule, it will show itself as a general periodical flushing of the part.

At this period of the disease other symptoms generally exist, which likewise differ in the two great classes of cases.

In chronic synovitis, which leads to joint changes, the joint may probably be moved quietly without exciting pain to the part, and without exciting spasms of the muscles that move the articulation. Pressure upon the part with the fingers will probably excite pain, although moderate pressure may be made between the two surfaces of bone without giving rise to any indications of distress. In disease of the bone entering into the formation of the joint, these clinical conditions do not all exist. The joint may be moved quietly, it is true, without exciting pain, but the attempt will, as a rule, excite spasm of one or more of the groups

of muscles which move the articulation. Moderate manipulation also will be well borne. Firm pressure upon the bones, or between the two surfaces of bone, will always excite pain—not the pressure produced by a jar, such as in the hip is caused by a sudden blow upon the foot or trochanter, for such a mode of investigation must be looked upon as a rough and somewhat uncertain one; indeed, it is almost sure to excite a start of the patient and an expression of pain; but the pressure which is produced by a steady force applied by the hand to the trochanter towards the pelvis, or through the foot to the articular extremities of the bones, a pressure which, in synovial disease, rarely, if ever, gives rise to pain, but in osteal disease invariably excites it.

These symptoms in the two classes of cases appear clearly to indicate the two distinct affections in their early stage. They apply to all articulations, and may be thus summarized:—

In synovial disease swelling is the earliest clinical symptom, with more or less fluctuation, each joint showing this in its own way. As a rule, this swelling is unattended with much pain. Pressure on the joint causes pain, although gentle movement may be made without increasing it or exciting spasm of the muscles which surround the joint. Interarticular pressure can generally be tolerated.

In articular osteitis pain is the earliest and most constant symptom—pain of an aching character, varying in intensity, generally increased by firm local pressure. There will be no visible enlargement of the part for some weeks or months, and no fluctuation. Gentle movement, as a rule, excites spasm of muscles about the joint, and interarticular pressure always increases it, and causes pain. Increased heat also exists about the parts, and is of an intermittent character.

When disease can be arrested in these first stages a complete recovery of the patient may ensue, for joint disease has not yet been established, and the cartilages are probably sound, and no irreparable organic change has taken place in any of the tissues. The first series of cases I propose to publish will illustrate this.

Should, however, diseased action originate in a joint as a result of accident, in a hip-joint as the result of a strain upon the

teres ligament, or in the knee upon the cruciate; should local disease be set up from any cause upon the articular extremity of a bone, either at the root of attachment of ligaments or at other parts; should articular osteitis of a portion of a bone take place as the result of accident, the changes which a joint may undergo as a secondary consequence will probably be more rapid, and consequently more serious; for it is through the bone that these changes occur—through those that take place in the articular cartilages, which are so intimately connected with the articular lamella of bone; and in cases of local disease of the articular extremity of the bone, these changes are very rapid. When a bone is inflamed, and this inflammation attacks the articular lamella of bone, wholly or in part, the articular cartilage sooner or later becomes involved. As long as the vascular supply of the bone is good, and the nutrition of the cartilage which rests upon it is not interfered with, all goes on well; but as soon as the nutrition of the bone is impaired, the cartilage on its surface which rests against it undergoes granular degeneration, loses its connection with the bone, and is either cast off or shed as a foreign body, wholly or in part, or degenerates more slowly, and assumes a perforated worm-eaten aspect. It will always, when thus diseased from bone affection, be readily stripped off the bone.

When these changes have taken place in the cartilage to any extent, disorganization of the joint exists, or is not far off; suppuration, however, may not show itself.<sup>1</sup> A complete recovery of the articulation is probably impossible, and certainly improbable—that is, a recovery with movement. Ankylosis, more or less complete, must, under such circumstances, be regarded as a natural cure.

These remarks have been made in this place to illustrate the necessity of recognizing the disease of a joint in an early stage, and, if possible, its original seat, for when the disease has set up changes such as I have just indicated a very different series of questions have to be considered, and practical points decided. These points will, however, come under our consideration as we proceed. I propose at present to apply these general remarks to diseases

<sup>1</sup> The second series of cases I propose to publish will illustrate the cure by ankylosis without suppuration.

of the hip-joint, and to illustrate, as far as I can, their truth by the quotation of cases. I shall commence by giving some few examples of early hip disease in which the bone alone appeared to be involved, and in which recovery took place, following these up by some examples of early synovial disease in which the same good result ensued, and making some remarks upon both classes of cases at the end of each section.—*Med. Times and Gaz.*, July 3, 1869.

ative medicines internally. I use the acid largely as a disinfectant, and am always pleased with the result.

*Deaths from Chloroform.*—Dr. A. T. HUDSON, late surgeon U. S. A., records (*Pacific Med. and Surg. Jour.*, July, 1869) the following case which occurred in the summer of 1863, in front of Atlanta, Ga. The patient was a robust soldier, belonging to the 76th Ohio Infantry, aged about 30. He was to undergo an amputation of a portion of one hand. Chloroform was given in the usual way. He had not taken more than six inspirations before the breathing became difficult and stertorous; the pulse ceased, and in a few moments he was dead. Artificial respiration and all other means tried were of no avail. A post-mortem the next day revealed nothing. Death was thought to be owing to paralysis of the heart.

In the same journal another case is recorded, which occurred in private practice in the summer of 1855. A strong, robust man, aged about 40 years, who indulged in occasional fits of intemperance, fell and dislocated the head of the humerus. Three days after—the patient meanwhile becoming quite sober—the physician in attendance sent for Dr. E. Bently, U. S. A., to reduce the dislocation, and while the latter was making proper preparation, chloroform (amount not known) was poured upon a sponge and held to the nostrils. After a very few inhalations, unconsciousness ensued, and with the heel in the axilla, the head of the humerus was replaced with an audible snap. Immediately thereafter the face became livid, and death took place from asphyxia. For more than an hour, though deserted by the alarmed attendants, and even by the other doctor, Dr. Bently employed all means to resuscitate, at his disposal, but in vain. He learned that the man was reported by his physician to have died of apoplexy.

## MEDICAL NEWS

### DOMESTIC INTELLIGENCE.

*Uses of Carbolic Acid.* By W. O. MENDENHALL, of Ash Grove, Illinois.—I have used carbolic acid in several different cases with much success, and therefore desire to call attention to it.

My first case was one of the sore mouth peculiar to nursing women. When first seen it was of long standing. There appeared to be no sound flesh in the mouth, and large pieces were daily sloughing out. I at once commenced the application of the acid, and in two days the sloughing ceased, and the fetid breath was much diminished. In two weeks the mouth was well. Once during the treatment the acid was left off, and other washes used for twenty-four hours, when the patient began to suffer much from dryness, heat, and pain in the mouth. The acid was again used, and relief was almost immediate.

I have also used it in several cases of tonsillitis with good results. It is one of my principal local applications for diphtheria. After the amputation of a finger I used it freely on the stump before dressing it, and it healed very soon—almost without any suppuration. B. J.—, with an axe, cut through his foot, on the top to the extent of five and a half inches, and on the bottom two inches—was dressed by sutures and adhesive strips, applying the carbolic acid freely every day. The wound is healing rapidly, and has been almost entirely free from pain. In a case of tetter of three years' standing, I applied the acid diluted with strong cider vinegar, and in one month the eruption disappeared, and six months after had not returned. During the treatment of the last case I gave alter-

*Medical Graduates in 1869* (continued from p. 71).

Name of College.	No. of Graduates.
College of Physicians and Surgeons of Keokuk, Iowa	26
Humboldt Med. College (St. Louis)	8
Charity Hospital Medical College (Cleveland)	50

*Prize of the French Academy of Sciences.*

—At the recent anniversary meeting of this Academy we are gratified to learn that honorable mention was awarded to Dr. AUSTIN FLINT, Jr., for his "original experiments having a great interest for physiology and pathology.—Experimental Researches on a new Function of the Liver." These investigations were originally published in the American Journal of the Medical Sciences for Oct. 1862.

*In Memoriam.*—At a special meeting of the Faculty of Jefferson Medical College, of Philadelphia, convened in reference to the death of their late associate, CHARLES D. MEIGS, M. D., it was

*Resolved.*, That the members of the Faculty have heard with deep-felt sorrow of the demise of their late distinguished colleague, Charles D. Meigs, M. D., Emeritus Professor of Obstetrics, whose name and fame have been so closely associated with the history of the Institution.

Ripe in years and rich in all the honours that can be gathered from the broad field of science and literature, he has closed a long and active life, efficiently and enthusiastically devoted to the best interests of the sick and suffering, and the extension and improvement of medical science.

Warm-hearted, genial and amiable in his intercourse with his fellows, brilliant, wise, and impressive as a teacher and writer, the Faculty of this College and the profession at large may well sorrow over the extinction of a life so rich in usefulness and renown.

*It is further resolved,* That the Faculty of the Jefferson Medical College, in deep respect to his memory, will attend his funeral, and that a copy of these resolutions be transmitted to his family.

B. HOWARD RAND, M. D.,  
Dean of the Faculty.

## FOREIGN INTELLIGENCE.

*Sulphate of Quinia in Tropical Diarrhoea.*—At a recent meeting of the Société Médicale des Hôpitaux, M. J. Simon communicated the notes of a very interesting case, in which the beneficial effects of sulphate of quinia were quite marvellous. The patient, a lady from the tropical regions, had been suffering for the previous twenty years from constant diarrhoea, and

had come over to France for the purpose of having better medical attendance. She had once inhabited a marshy locality, and had had malarial fever; but this had completely disappeared, and at the time M. Simon first saw her, there was nothing in her condition which called his particular attention to the idea of a connection between malarial poison and the bowel complaint. Yet the spleen was much enlarged, and the liver voluminous. The patient was completely free from fever. There had never existed any symptoms of dysentery. Opiates, astringents, and tonics were tried, but with no beneficial effect. On February the 6th the patient was in a moribund condition. M. Simon thought of administering fifty centigrammes of quinia. The effect was instantaneous. Under the influence of this treatment the patient rallied rapidly, the diarrhoea completely disappeared, and the spleen and liver returned to their normal dimensions. The patient has now completely recovered her health. From time to time she may have slight diarrhoea, which assumes the character of indigestion, but disappears rapidly on the employment of quinia. The case is most important, as showing one of the peculiar forms of malarial poison, and the wonderful specific action of quinia.—*Lancet*, May 15, 1869.

*Iodide of Ammonium in Diseases of the Glandular System.* By Dr. J. WARING-CURRAN.—The iodide of ammonium in diseases of the glands I find by experience a much more active therapeutic agent than that of the iodide of potassium, whether internally administered or locally applied. In the following forms of glandular disease I can testify to its efficacy and curative properties, and have no hesitation in pronouncing it one of the best preparations with which I am acquainted.

*Goitre.*—There is no part of England wherein I have seen more cases of brachiocele than at Bacup, a cotton manufacturing valley, about twenty miles from Manchester. Sixty per cent. of the female population suffer from goitre in some shape or form. The usual history is, that it commences "during the pains of the first labour." I have had ample opportunity of remarking the accuracy of the statement that there was a connection between goitre and the uterine functions, that the gland became enlarged during the menstrual pe-

riod, and particularly so in old goitres in women about change of life, when the discharge is scanty and the colour altered. All the several varieties of bronchocele are to be seen in the valley of Rossendale. One patient is so unfortunate as to possess one which I am confident would weigh fourteen pounds; it extends over the clavicles and sternum, upon which latter it rubs, and causes little inconvenience apparently. The enlargement has been steadily increasing for thirty-seven years.

Cases of incipient goitre treated soon after their being first observed with the iodide of ammonium made good and permanent recoveries. I prescribe the iodide thus:—

R.—Ammonii iodidi gr. xl; spiritus chloroformi 3ij; aquae camphorae ad 3vij. Cup. 3j, ter in die.

At the same time I direct the following cerate to be rubbed into the growth night and morning:—

R.—Ammonii iodidi 3ij; glycerini 3ij; adipis benzoat 3jss.

In some few cases I have obtained great benefit by stopping the iodide of ammonium mixture for a few days, and substituting the hypophosphites of lime. Hitherto I have inwardly given the old standard formula of iodine with iodide of potassium, but a more extensive field in the treatment of the complaint convinces me of the superiority of the drug I advocate.

*Tabes Mesenterica*.—The local application of the iodide of ammonium ointment over the abdomen, and the internal administration of the same drug—the age of the patient guiding the dose to be exhibited—surpass any form of treatment previously had recourse to. Of course the convalescence is slow, and cod-liver oil or glycerine, pancreatic and suet and milk must be given; but these I include more among the articles of diet than the medicines of the physician. A steady perseverance with these measures effects much good. The iodide of ammonium appears to reduce the size of the enlarged glands whose functions are impeded, and to permit the process of assimilation to go on in its natural way.

*Strumous enlargement of the lymphatics*, wherever situated, if treated before pus has actually formed on the areolar tissue covering the part disorganized, will, as a rule, yield to the iodide of ammonium, combined with a generous diet and change

of air. I have before me, in my case-book, the history of a girl, aged eleven years, who had long suffered from strumous enlargement of the cervical glands, the sequelae of scarlet fever. She had taken syrup of the iodide of iron, Parrish's "chemical food," iodide of potassium, quinia, and cod-liver oil, but without effect. As a last resource, and it was one of the first cases wherein I prescribed it, I directed her to take three-grain doses of the iodide of ammonium twice a day, and to apply the cerate containing the same preparation. I had the satisfaction of observing day after day the well-marked gradual diminution of the glands, and the speedy restoration to health. The relatives informed me afterwards that their patient was so exhausted with the girl failing to improve, that they were in the act of calling in further advice. Had such been done, and the iodide of ammonium prescribed, the consequences would have been unpleasant in the extreme. And how often is it that members of our profession obtain a notoriety through similar occurrences, while in one or two instances I know they had not the honesty to give credit where it was actually due and well won, but retained for themselves a success to which they were far from entitled.

*Simple strumous adenitis* gives way more rapidly and with better results under the iodide of ammonium than any other treatment.

*Sympathetic bubo* has, in four cases which I have specially treated with the medicine advocated, terminated so satisfactorily that I cannot refrain from recording the circumstance.

*Enlargement of spleen after ague*.—I had an opportunity last August of testing the therapeutic effect of the ammonium in some cases of enlarged spleen in a most febrile district of South Lincolnshire. Although the benefit was not permanent in any of the cases, as I believe it was not persevered in for a sufficient length of time, yet, during the period the drug was being administered, the more immediate symptoms appeared to yield to it.

*Chronic hepatic enlargement* has in several instances been recorded in my case-book, where blue pill, podophyllin, taraxicum, and nitro-muriatic acid have proved inert, turned out as cured. I can strongly recommend the drug in this disease, but I invariably blister the hepatic region first,

and then dress the blistered surface with the iodide of ammonium cerate.

*Tubercular sarcocele* was treated in three instances by the iodide of ammonium. In two of the cases there was a syphilitic history, and as the patients were pressing for a speedy rather than an effectual recovery, I combined four drachms of blue ointment with the iodide of ammonium cerate, with the best effects subsequently; so that I am unable to give all the credit to the iodide of ammonium—a drug which my experience teaches only requires to be fairly experimented with in order to be more generally employed in diseases of the glandular system.—*Med. Press and Circular*, June 9, 1869.

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*Local Treatment of Croup*.—Dr. WEBER, of Darmstadt, has recently been employing lactic acid in croup, to the use of which he was led by noticing its remarkable power of dissolving fibrinous exudations. In the first instance he adopted it to clear away the croupal membranes which collected in the canula after the performance of tracheotomy. The beneficial effects were so great that he proceeded to apply it locally before attempting to operate, and although he receives many cases of this disease into his wards he has never had any occasion since commencing its use to open the trachea. The mode of application of the lactic acid is by means of the inhalation (spray?) apparatus, from ten to twenty drops in half an ounce of water being inhaled, at first every half hour, and then in proportion as the breathing is relieved, the quantity being reduced from ten to five drops in the same quantity of water. He never found it requisite to continue the remedy for more than twelve hours. Usually after the application had been repeated for a few times, he discontinued it, and replaced it by strong camomile tea. The eyes and other parts of the face must be carefully protected from the steam, or its cauterizing effect becomes immediately apparent.—*Lancet*, June 19, 1869.

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*Iron Sugar*.—A new preparation of iron has been recently introduced into medicine by M. C. CHAURAND, under the names of *Sucre Ferrugineux*. It is in the form of small distinct cubical crystals of cane sugar, having a reddish-brown colour due to the presence of a portion of peroxide of

iron in a soluble condition diffused in and upon each crystal. When introduced into cold water it dissolves, forming a deep red solution, only a trace of the oxide of iron remaining insoluble. If the solution be boiled or kept for some time, the oxide is precipitated.

This preparation appears to contain nothing but a pure hydrate of peroxide of iron associated with the cane sugar. The proportion of iron present is not large, but the compound is pleasant to the taste, and is intended to be taken in doses of two or four teaspoonfuls half an hour after meals.—*Med. Press and Circular*, June 2, 1869.

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*Apomorphia*.—Dr. GEE communicated to the Clinical Society, May 14th, a series of important observations as to the properties of apomorphia, the new base recently obtained by Dr. Matthiessen by the prolonged action of strong hydrochloric acid on the chloride of morphin. An account of the chemical properties of this alkaloid, which differs from morphin as to composition by the elements of a molecule of water (the formula of morphin being  $C_{17}H_{21}NO_3$ , that of apomorphia  $C_{17}H_{17}NO_2$ ) will be found in the *Proceedings of the Royal Society* for the present month. Dr. Gee's numerous observations show that apomorphia is a certain and promptly acting emetic, and that as such it possesses the following advantages over all others at present in use: 1. It acts in extremely small doses, one-tenth of a grain being sufficient when injected subcutaneously to produce vomiting in ten minutes, while by the mouth twice as much will act in twenty minutes. 2. It possesses no irritant properties, and can therefore be injected under the skin without the slightest inconvenience. 3. It acts with unfailing certainty. 4. The vomiting produced is not followed by nausea. When employed in larger doses it produces in animals symptoms referable to the nervous system, particularly epileptiform convulsions, preceded by great excitement and followed by muscular relaxation and death. In one case, that of a patient affected with chronic Bright's disease, the emetic action of one tenth of a grain of apomorphia was succeeded by slight and very transient delirium.—*Med. Times and Gazette*, June 12, 1869.

*On the Injection of Ammonia into the Circulation.*—At the April meeting of the Medical Society of Victoria, under the presidency of Dr. Bird, Professor Halford read an interesting paper on the Injection of Ammonia into the Veins, with the object of demonstrating the perfect safety with which ammonia can be injected into the circulation, not only through the medium of the veins, but directly into the heart. Professor Halford detailed a series of experiments of a highly interesting character recently made by him, in which vital reaction had been shown to be the certain consequence of the employment of this alkali by injection. The "foolish temerity" with which the possibility of doing this safely had been denied by persons who had never attempted the experiment themselves was severely commented upon in the course of the discussion, and the value of Professor Halford's discovery was pointed out as bearing upon the treatment of all affections in which a powerful heart-stimulant is indicated; in proof of which Mr. Fitzgerald related a case of pyæmia, in which, though death eventually took place, life was considerably prolonged by ammoniacal injection. As a means of resuscitation in syncope from chloroform it was considered to afford a most valuable resource, and Mr. Gillbee stated his intention of employing it on the first favorable occasion. Professor Halford's paper did not entertain the question of the manner in which ammonia acts in antagonizing the influence of snake and other poisons. That part of the subject, he stated, he reserved for a future paper. A letter, however, was read by Dr. Neild, from Dr. Day of Geelong, in which the action of snake virus and other similar poisons was shown to be ascribable to their power of paralyzing the sympathetic nerve, and the effect of the ammonia traceable to its intense power of exciting muscular contractions.—*Lancet*, June 19, 1869.

*Otitis of the Middle Ear in New-born Infants.*—At the Paris Medical Hospital Society, M. PARROT, on presenting some specimens, read a communication "On Otitis of the Middle Ear in New-born Infants." On examining the bodies of new-born infants, lesions of the middle ear are frequently met with, which have hitherto excited little attention. They are almost always similar in character, any differences

observable being referable solely to the period of their evolution at which they are observed. On opening the cavity of the tympanum it is found filled either with a reddish, semi-transparent, gelatinous substance, a greenish-yellow mass like concrete pus, or a yellowish liquid of the consistence of serous pus. In the first case the ossicula and the membrane lining the tympanum are in their place, and of a red colour. In the second the redness is much more intense, and the membrane is tumefied, red, opaque, and difficult of recognition. When a fluid like serous pus fills the cavity the membrane has disappeared, and the separated bones are lying in the fluid. Accompanying this condition, thus far there has been found no appreciable change in the external meatus or the internal ear, and although the Eustachian tube is sometimes tumefied and obstructed with mucus, it is in general healthy. The membrane of the tympanum on its external surface has always been found intact, although its mucous layer is often softened. These appearances, as well as those derived from microscopical examination, clearly show that the lesion must be regarded as belonging to the class of catarrhal inflammations. Its influence in producing deaf-dumbness need not be insisted upon. In some of the cases upon which the paper has been founded the infants manifested during life more or less deafness. As to the causes of this otitis much obscurity exists. It is met with accompanying very different affections, among which pneumonia is especially to be noted, as also the diseases of the digestive canal which are so common at this period of life. But it may be stated that most of the infants in whom the lesion has been observed have suffered during a variable period from great disturbance of nutrition, owing to insufficient or faulty food. M. Dumontpalié observed that the frequency with which M. Parrot has met these appearances would seem to show that they had not any great influence on deaf dumbness. M. Parrot replied that, in fact, the children who have these lesions in an advanced degree die, but others who are only slightly attacked survive. As to the actual part the disease in question plays in producing a fatal result, this is probably not considerable, as it is very rare to find the lesions propagated to the brain. The right side is the one usually affected, and if both sides are so, that is usu-

ally the worst. As already observed, nineteen-twentieths of the infants on whom these researches have been made have died either from lobular pneumonia, or affections of the digestive canal.—*Med. Times & Gaz.*, June 5, 1869.

*Suture of a Tendon.*—A drunken youth fell, on February 8, with his hand on some glass, causing a severe wound of the dorsal surface of the metacarpo-phalangeal articulation of the right thumb. The cut extended through all the soft parts, exposing the bone to a considerable extent, and of course dividing the long extensor of the thumb. The second phalanx of the thumb was flexed, and the patient could not move it. The two ends of the tendon were not visible in the wound, but M. Tillaux, by making an incision in the direction of the tendon, soon found the upper end considerably retracted, and shortly afterwards the lower end. These he brought into exact adaptation by means of a single point of suture made with ordinary ligature-thread. The thumb was extended on a splint until the 22d, when this was removed, and it was found that then—*i. e.*, the thirteenth day—slight movements of the thumb could be executed; but it was only by March 20 that the cure could be considered quite complete, the patient then having quite recovered all the movements of the thumb.—*Med. Times and Gazette*, June 12, 1869, from *Bull. Gén. de Théráp.*, May 15.

*Test for Hydrocyanic Acid.*—At a late meeting of the Academy of Medicine, Dr. SCOUTTETENN communicated the substance of a disquisition on hydrocyanic acid, found among the papers of the late Prof. Schoenbein of Baden. The question discussed was, whether there was a test for the above-mentioned liquid besides those of M. Liebig and M. Buignet, which, within certain limits, may reveal the presence of prussic acid, but are insufficient to fix its quantity and detect a crime with certainty. Prof. Schoenbein then proceeds to describe a reagent discovered by himself, and delicate enough to bring out to view even the millionth part of a drop, whether diluted with water, or vaporized in the air: a circumstance affording a new proof of the incalculable divisibility of matter. Dr. Scoutteten, who lives at Metz, announced in his communication that he had repeated the late Prof. Schoenbein's

experiments with the aid of two chemists, MM. Guébin and Pont, and that he begged to submit some of the test-paper prepared by himself to the Academy for further trial. The specimen forwarded was of the kind called filtering paper, and had been soaked in a solution of three gms. of guaiacum resin in 100 gms. of alcohol. To use it, a solution of ten decigr. of sulphate of copper in fifty gms. of distilled water should be made, and the paper, which is white, cut into narrow slips. One of the latter being wetted with the solution, it is then exposed to the action of the minute quantity of hydrocyanic acid dissolved in water and suspended in the air; the paper will then instantly turn blue. Dr. Scoutteten remarks that these slips of paper will be useful in examining the quality of the medicinal waters or syrups containing a very small quantity of the acid. The paper need only be placed on the unstoppered neck of the phial containing the medicine, and the blue colour will at once become visible. Various other experiments are described, all tending to the same result.—*Med. Press & Circ.*, July 7, 1869.

*New Hospital for Sick Children.*—The medical charities of London have received an important addition by the opening of the Evelina Hospital for Sick Children, an institution built and fitted up at the sole charge of the Baron Ferdinand de Rothschild, in memory of his late wife. The Hospital contains four stories, besides the basement, in which last are the kitchens, store-rooms, etc., and, at the back, a dead-house and a post-mortem room. The ground floor is devoted chiefly to the apartments for the resident officers of the hospital, and to the board-room. The first and second floors contain the principal wards, and it is intended that they shall be appropriated, the one to boys, the other to girls. The principal ward in each floor is a magnificent room, 100 feet long by 24 feet in width, and 14 feet in height. Besides this, each floor has four other wards, equally lofty, and all of good size, of which one is to be used as a play-room for convalescents. A great feature of the Evelina Hospital is the lightness and airiness of its interior. The two principal wards above referred to have each nine windows towards the street, these windows opening horizontally in three compartments. They have also eight windows on the opposite side, entering into corridors, which

run parallel with the ward. Thus it will always be easy to ventilate into the corridors, should the weather prevent the other windows being opened. The fourth floor is devoted to the sleeping apartments for the nurses, and to a small quarantine ward for the reception of cases which may arise in the house of a doubtfully contagious character. Additional provision will also be made for the accommodation of zymotic diseases. All the wards have a good supply of hot and cold water, and communicate with the kitchens, etc., by means of a lift. The lavatories, etc., are placed at the side of the staircase, opening into the corridors opposite to the wards. The out-patient department is situated in the rear of the hospital, and consists of a large waiting-room, and of rooms for the physician, the surgeon, and the dresser. Between this and the body of the building is the dispensary.

The Evelina Hospital for Children will, when its wards are all opened, contain at least 100 beds. It will be ready for the reception of in and out-patients on Monday next.

A permanent endowment of this hospital is in contemplation, but it remains at present the private property of the founder, who has arranged that a sum of money sufficient to maintain it in full efficiency, with from thirty to forty beds, shall be placed at the disposal of his managing committee for the first three years as an experiment, in order to test the working efficacy of the institution, and as a means of judging of the probable permanent cost of the whole establishment when all the wards shall have become fully occupied, and when others, it is hoped, will aid in the liberal work which has been thus so auspiciously commenced.—*Med. Times and Gaz.*, June 19, 1869.

*Biostatic Immunities of the Jewish Race in Europe.*—M. LEGOYR terminates with the following conclusions an elaborate paper on the above subject recently read before the Paris Statistical Society:—

"The facts which are here collected, and which are nearly all derived from official sources, are almost unanimous in demonstrating that the Jewish race is distinguished from the other European races, in a biostatic point of view, by the following phenomena: 1. Its general fecundity is less. 2. So is it, at least as a general rule, with regard to its legitimate fecundity.

3. It is especially so with regard to its natural or illegitimate fecundity. 4. In an equal number of births, there are fewer children born dead, which indicates that the Jewish woman passes through her period of gestation more favourably than the Christian woman. 5. But the most remarkable privilege of the Jews is, without contradiction, their relative low mortality, and that even when they are members of the lowest classes of society. This lesser mortality is not (and we cannot too much insist on this point) the natural consequence of a lesser fecundity, as, with an equal number of births, they count fewer deaths, and that by calculating on Halley's method—that is, in supposing the births equal to the deaths (taking place at the same ages)—it is found that they have a mean and probable life which is longer than that of the autochthonic races. It would not be correct to say that this difference in mortality is due to a large relative preponderance of adults, since in Prussia, which is the only country in which this portion of the population has been enumerated by age, there is found to be a greater number of children in it than in the Catholic and Evangelical population. 6. We have, moreover, seen that, as a consequence of this characteristic physical aptitude, the Jewish race becomes acclimatized everywhere, and propagates itself under every latitude. 7. Finally, we have shown that the Jews are possessed of a special aptitude enabling them to struggle against infected media, and protecting them against contagious diseases."

After discussing the various explanations of these immunities offered by different observers, M. Legoyr states that he believes the greater longevity of this race may be explained by the following considerations:

1. The Jews marry earlier than the Christians, and thus derive at an earlier age the advantages which statistics show are incident to the married state. Still, from their well-known prudence and circumspection, it is not to be supposed that they enter upon this until prepared to meet its exigencies. Among them hasty and rash marriages, which are alike hurtful to the health of parents and children, are rare. 2. The fecundity being less, they can pay much more attention to the preservation of their children. 3. By reason of the small number of illegitimate children they have, they escape the exceptional mortality which sweeps

sway such children. 4. The Jew does not pursue any calling which demands very hard labour. He is neither an agriculturist, a labourer, mechanic, sailor, nor miner. Before all things, he is the shopkeeper, merchant, banker, artist, *savant*, man of letters, or public functionary. 5. The Mosaic law contains ordinances which, being purely hygienic, must exercise a favourable influence on the health—e. g., the verification of the condition of slaughtered animals, the frequency of ablution, the practice of circumcision, and the separation of the husband until a week after menstruation, etc. 6. The strength of the family feeling among the Jews. It is only when it is absolutely impossible, and without distinction of rank, that a Jewish woman does not suckle her child. The children, too, are the objects of incessant and most vigilant care, which indeed is returned by the respect and solicitude which these manifest for their parents, especially when aged or infirm. This is probably one cause of the rarity of suicide among the Jews. 7. The sobriety of the Jews is incontestable. 8. Throughout the entire Jewish community, a warm feeling of charity for the indigent and miserable prevails. 9. The religious Jew is remarkable for his great serenity of mind, and his deep-seated faith in Providence and the high destinies of his race. The constancy, the *perennité* of the Jewish temperament, is well reflected in his religious faith, which has remained immovable for so many ages. 10. The morality of the Jews, as deduced from criminal statistics, seems to be real, and is only an indication of those regular habits of life which exercise so great an influence on the duration of life.—*Med. Times and Gaz.*, July 10, 1869.

*International Medical Congress.*—We have been favoured with a copy of the rules and programme of the second session of the International Medical Congress, which is to be opened at Florence on the 20th of September next, and to continue for two weeks. The honorary office of president has been offered to M. Bouillaud, ex-president of the Paris meeting. Prof. Renzi, of Naples, is president. The Congress is to be exclusively medical and scientific—religion, politics, and philosophy are excluded.

The following is the programme of sub-

jects arranged by the committee for discussion:—

1. Marsh miasma; the conditions which favour its development in different countries; its effects on the human organism; the most efficacious means for destroying its causes and effects.

2. The therapeutic value of the different methods of treating cancer locally; their indications and counter-indications; the real value of general treatment.

3. The treatment of gunshot wounds in its relations to modern warfare.

4. The hygienic condition of hospitals, and the comparative value of treatment in them and at the homes of the sick.

5. On the influence of railroads on human health.

6. The conditions which favour the production of endemic and epidemic diseases in large cities; the means for their prevention, and the advantages which may be derived from large rivers or the sea in their vicinity.

7. The rights and duties of physicians in regard to the legislation of different countries, and the ameliorations which may be reasonably expected to result.

After the discussion of the above questions, papers on other subjects may be read.

*Relief of the Sick and Wounded in Time of Maritime War.*—We take great pleasure in giving place to the following communication addressed to us, and will ask the attention of our professional brethren to it:—

"Berlin, June 15, 1869. Sir: May I request the favour of your granting a place in the columns of your journal to the enclosed circular, which opens a literary competition on a subject deeply interesting to all those who would fain alleviate, to the best of their powers, the miseries of war, if such a calamity should again be permitted to visit the civilized world. I have the honour to be, sir, your obedient servant, R. VON SYDOW, Chairman of the Central Committee of the Prussian Association for the relief of wounded and sick soldiers in time of war:—

*"Prize Essay.*—By the additional Act of the 20th of October, 1868, the principles of the Convention of Geneva of the 22d of August, 1864, were made applicable by the

States which recognized them to maritime war. The 13th article of this act, which fixes how far, and under what conditions, neutrality shall be allowed the vessels belonging to the relief societies, starts from the supposition that these societies will afford aid and assistance to wounded and shipwrecked sailors in case of a maritime war; and it thus responds to a wish expressed in 1867 by the International Conference of delegates from the relief societies who were then assembled in Paris.

"The discussion which took place at the sitting of the International Conference at Berlin, on the 23d of April last, advanced a step towards the application of this article. The Prussian Central Committee is now desirous that the practical side of the question thus raised should be examined in the light of the experience acquired during the more recent maritime wars, and with this object it offers a prize of 100 Frederics d'or [equal to about £85] for the best essay on the following questions:—

"In what circumstances, under what form, and with what success, during the maritime wars of the past, has private charity assisted in saving the shipwrecked and taking care of the sick and wounded of the belligerent fleets?

"To what extent and under what conditions can the relief societies undertake this task with a probability of success?

"What arrangements ought to be made in time of peace, in order to obtain such results as may satisfy the wishes of philanthropy in this respect?

"Would the realization of these wishes be hastened or secured if the Permanent Relief Committees, whose duties are to aid the hospital and ambulance service of armies in time of war, were to establish a practical understanding with the existing life-boat institutions?

"These are the principal questions of which the Berlin Central Committee desires a solution. It requires that the author shall rest his conclusions upon the experiences of former wars, and also take into consideration the ideas brought forward at the sitting of the International Conference of Berlin of the 23d of April last. No restrictions are placed on the arrangement or extent of the essay.

"The report of the sitting of the 23d of

April last will be forwarded to any person who, intending to occupy himself with the question, will address an application for the same to the office of the Prussian Central Committee, No. 4 Linkstrasse, Berlin. "The essays, written in German, French, or English, must be sent to the Prussian Central Committee not later than the 1st of May, 1870. They must be without signature, but distinguished by a motto, and accompanied by a sealed note reproducing this motto, and giving the name and residence of the author.

"On the 30th of September, 1870, the birthday of her Majesty the Queen of Prussia, the prize will be awarded to the essay to which it shall have been adjudged by a jury nominated by the committee.

"The author will have the right to publish the essay which shall gain the prize, but if within six months after the date of the decision the author has not availed himself of his right, the Prussian Central Committee may dispose of the essay.

"The Central Committee of the Prussian Associations for the relief of wounded and sick soldiers in time of War. R. Von Sydow."

*Mortality in Hungary.*—The Hungarian bills of mortality do not give a favourable idea of the sanitary condition of that country. The *Neue Freie Presse* observes on this subject: "Of 100,000 inhabitants 2200 die annually in England, 2380 in France, 2220 in Belgium, 2900 in Prussia, 4500 in the Austrian monarchy, and in all Hungary 4540; but in Siebenbürgen the number is only 3097, and in the German part of the Banate 4200, so that in the Magyar part of the country the proportion is 5240, or about two and a half times as great as in England. The high rate of mortality among the male population is not less surprising. While in the entire Austrian monarchy 10,570 males die for every 10,000 females, the proportion in Hungary is 10,658 males and in the Magyar parts of the country the average is so high as 10,700." The Austrian journal believes that with a little attention to hygiene Hungary might easily support three times as many inhabitants as England, whereas, in consequence of apathy and ignorance, the population is not nearly half so numerous as that of Great Britain.—*Medical Press & Circ.*, July 7, 1869.

**The Monera.**—Have any of our readers heard of the monera? If not we will illustrate them by giving a sketch of the lowest forms of animal life that have hitherto been discovered, and to which the above title has been applied by Prof. HACKEL. It is not long ago that the Amœba was held to be the simplest existing organism; and indeed the naturalist and the microscopist may well ask what can be simpler than a particle of animal jelly no bigger than a point of a pin, uninclosed by membrane or cell-wall, and in which a nucleus and a contracting vesicle, or vacuole, can alone be seen? Surely this is the extreme of simplicity. But as we are told that in the lowest depths there is still a lower deep, so in these rudimentary organisms successive grades are found, each of which is complex, and might be regarded as a superior being to the one below. The presence of a nucleus and of a rhythmically contracting vacuole constitutes such marks of superiority in the Amœba, when compared with the class of creatures we are about to describe. Their presence indicates a rise above the dull dead level of homogeneity, and for ought we know an amoeba may congratulate himself on his superiority in structure and energies to the *canaille* moneres around him. At any rate he takes advantage of it. The beings in question were first noticed by HACKEL during a visit to the Canary Islands, where he found one form, the *Protomyxa aurantiaca*, cleaving, in the form of just perceptible red dots, to the shells of a certain cephalopod. On examining these red spots with the microscope he found that they consisted of a reddish finely granular spherical mass, inclosed in a transparent homogeneous capsule. "Why, this was an egg," some will exclaim. Not at all; for (note the difference) in the first place it contained no germinal vesicle, spot, or nucleus; and secondly, its subsequent changes were totally opposed to that assumption. It was the animal, if animal it is to be held, in a state of repose, quiescent, encysted. After a time the finely-granular orange-yellow mass breaks up into a mass of smaller balls, like shot in a spherical cartridge, not, however, by continuous division, but as though many centres of attraction had simultaneously formed, none of which, however, have any cell-wall or membrane around them. By-and-by the capsule bursts, the spheres stream out of the rent, and in doing so assume a tadpole-like shape,

the head remaining globular, the tail fining off to an invisible point, and the whole wriggling, lashing, and wandering through the surrounding water. Soon the movements become tardy, and the creature settles down to commence a new stage in its existence. It retracts the ciliary appendage or tail, and shoots out irregularly-pointed and dentated processes, termed pseudopodia, from all parts of its circumference. These seize on minute diatoms, radiolaria, and the like, and, though themselves consisting only of a matrix, with a fine mist of granules scattered through it, rapidly appropriate the softer structures of such organisms. When well supplied with food they rapidly grow, forming dendritiform processes, and fingers which creep slowly from point to point. The granules present in the protoplasm enable the eye to perceive that active movements are taking place in the semi-fluid substance of which it is composed. When a fresh supply of aliment, a delicate morsel, is met with, a rapid stream sets in to that point, and the sarcod, creeping onwards—to compare great things with small—like an avalanche, overwhelms and invests the victim. The juices sucked out, the exuviae are thrust out or left behind as the creature advances in its destructive course; for it envelops, perhaps after rendering helpless by stinging, animals far more active than itself, and no armour is so close that this subtle sarcod cannot penetrate. When it has attained considerable size, vacuolar or clear spaces form in it; and after a time it probably again becomes encysted, to rise again, like a phoenix, if not from the ashes, at least from the grave of its former self. Our space is limited, or we would have added a few lines descriptive of Professor HUXLEY's Monera, if he will allow us to call it so, the *Bathybius Haekelii*, that cleaves to the sounding apparatus as it rises from the profound of 2000 fathoms, from darkness and silence to light and life and sound, a similar fragment of jelly, but capable of forming a few spicules and shell-like disks of calcareous matter, the first effort after the procurement of food being thus the formation of a skeleton or a support to its yielding body—the first stage of that wonderful series of processes which ultimately result, as so many culminating points, in those forms we call the heads of classes in the vegetable and animal kingdoms.—*Lancet*, June 19, 1869.

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We doubt if there is in the English language any compend of physiology more useful to the student than this work.—*St. Louis Med. and Surg. Journal*, Jan. 1869.

The fact that Professor Smith edits the American reprint of this work, with valuable contributions of his own, from a belief that it will thus become the best text-book for his class in the University, is of itself high praise. The more closely we examine the work the more thorough is our conviction that Prof. Smith has not estimated it too highly. The student feels this as he progresses in the work, and the feeling of warm attachment this experience gives him for the author enables him the more readily to assimilate its contents. It is a most attractive work upon physiology, and with the many advantages it possesses as "an educational work" we do not see what is to hinder it from becoming a text-book in our medical colleges generally.—*Nashville Journal of Medicine and Surgery*, Feb. 1869.

We shall proceed to point out, in as brief a manner as possible, the peculiarities of this really splendid work. On this special branch of medical science, as a text-book for the student or a work of reference for the practitioner, it is unequalled. In conclusion, we can only say, that it is well worth the attention of the profession; every medical man should have it as a work for reference, and every student of medicine will find it the most complete of any ever issued upon the subject.—*Dominion Med. Journal*, Dec. 1868.

We have read Mr. Marshall's work through with great care, and we may add with great pleasure. Taking it altogether, it is one of the most complete treatises on physiology we possess, and it is surprising how much information is here compressed into the compass. As every great division of physiology is treated in nearly the same fashion, our readers will see that Mr. Marshall's book is one of no ordinary character. Everywhere there is evidence of its being written with care, and we are especially disposed to praise the lucid manner in which the numerous topics cognate to, and yet scarcely forming a part of physiology, are treated; we allude to such subjects as osmosis, spectrum analysis, the description of various instruments used in physiological researches, as the galvanometer and sphygmograph, the cardiac and respiratory pathological sounds, etc.—*Brit. and For. Med. Chir. Rev.*, July, 1868.

We may now congratulate him on having completed the latest, as well as the best summary of modern physiological science, both human and comparative, with which we are acquainted. To speak of this work in the terms ordinarily used on such occasions would not be agreeable to ourselves, and would fail to do justice to its author. To write such a book required a varied and wide range of knowledge, considerable powers of analysis, correct judgment, skill in arrangement, and conscientious spirit. It must have entailed great labor, but now that the task has been fulfilled, the book will prove not only invaluable to the student of medicine and surgery, but serviceable to all candidates in natural science examinations, to teachers in schools, and to the lover of nature generally. In conclusion, we can only express the conviction that the merits of the work will command for it that success which the ability and vast labor displayed in its production so well deserve.—*London Lancet*, Feb. 22, 1868.

HENRY C. LEA, Philadelphia.